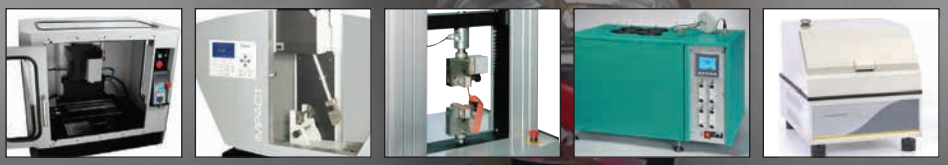
ADVANCED

PLASTICS TESTING TECHNOLOGIES

QUALITEST™

WWW.WORLDOFTEST.COM



- Universal Testing
- Durometers
- IRHD Hardness
- Impact
- Pipe Testing
- Sample Preparation
- Specimen Dies
- Clicker Presses
- Melt Flow Indexers
- Capillary Rheometers
- Limiting Oxygen Index Chamber
- Rotary Abrasion
- HDT / VICAT
- Laboratory Mixing Extruder
- Specific Gravity Testers
- Brittleness Tester
- Freezing Tester (Low Temperature)
- Aging Ovens
- Film Testing
- Film Thickness Gauges
- Color Testing Equipment
- Miscellaneous Testers

About Qualitest

Qualitest is a global supplier of testing technologies that helps customers improve their design, development, and manufacturing processes. Together with the WorldofTest.com network, our mission is to help our customers produce the highest quality products faster and at a lower cost. A leader in offering the widest range of precision hardness measurement tools on the market, Qualitest leverages extensive industry experience to provide products that accurately determine the hardness of metallic and non-metallic materials. These solutions include portable and low-cost hardness testers as well as benchtop and sophisticated systems to meet your highest demands. Qualitest also delivers leading-edge in-line hardness testing systems for higher volume and automated testing processes.

Qualitest has a rapidly growing presence worldwide, maintaining offices in USA, Canada, UAE, and Asia. By joining a wide network of sales and service partners, we ensure that our customers have fast and efficient access to Qualitest support and consulting services to realize the optimal return on their testing solution investments.
Qualitest offers after-sales service support directly or through our authorized and nationwide A2LA accredited and ISO17025 certified service centers.

Table of Contents

4 Universal Testing Machines

6 Universal Force Test Systems

8 Durometers: Shore & IRHD Hardness Testers - Portable

9 Durometers: Shore & IRHD Hardness Testers - Benchtop

10 Charpy / Izod Impact Testers

11 Drop Impact Testers & Plastics Pipe Testing Instruments

12 Plastics Pipe Testing Instruments

13 Sample Specimen Preparation

14 Specimen Dies & Clicker Presses

15 MFI, Capillary Rheometer, HDT / VICAT & LME

16 Specific Gravity, Densimeters, Brittleness & Freezing

17 Film Thickness Gauges

18 Film / Transparency Testing

19 Film Permeability Testers

22 Automatic Film Tensile Testers

24 Color Testing Equipment

27 Aging Ovens

28 Advanced Polymer Testing Instruments

29 More Plastics Testing Equipment

Plastics

Plastics are made by using microscopic building blocks called hydrocarbons, typically derived from petroleum or natural gas. These monomers (small molecules) are bonded into chains called polymers or plastic resins. Different combinations of monomers yield resins with special properties and characteristics.

General Applications

Plastics are often used to replace other common materials such as metals and wood because of their low cost and durable characteristics. Plastics offer innumerous advantages in production as they are easily softened or melted, and can be molded into any shape.

Plastics in general can be divided into two categories: thermoplastic and thermoset processing groups.

Thermoplastic materials are made of polymers or long-chain macromolecules. Heat can transform this material, giving it the flexibility to be formed into tools or key components of other products. This characteristic also allows plastics to be reused or recycled. The other components that make up this material are additives that change properties such as color, stiffness, weatherability, and wear resistance. Thermoplastic materials are necessary for essential manufacturing materials such as sheets, round bars, round bars with a steel core, pipes, and various other sections.

Thermoset plastics are made of polymers that are permanently set through exposure to heat and catalysts during the manufacturing process. As heat can no longer change their shape, these materials are thereby used at higher temperatures and pressures than thermoplastics can withstand.

The ideal combination of processing flexibility and performance enables plastics to be used in an extensive range of applications ranging from low-cost disposable items to expensive specialty parts. Plastics are key materials in the production of automotive parts, electrical appliances, aircraft and aerospace components, sporting goods, packaging, toys, food packaging, and much more. There is no other material that can match the durability of plactic due to its flexibility, fast molding qualities, color absorption, resistance to corrosion, low weight, electrical and thermal insulation, and general toughness and longevity.

The extensive use of plastics requires testing at all stages of development and manufacturing to ensure that products are able to perform well in their intended use. The tests are conducted by companies to guarantee quality control, using internationally standardized methods in the production of all plastic products.

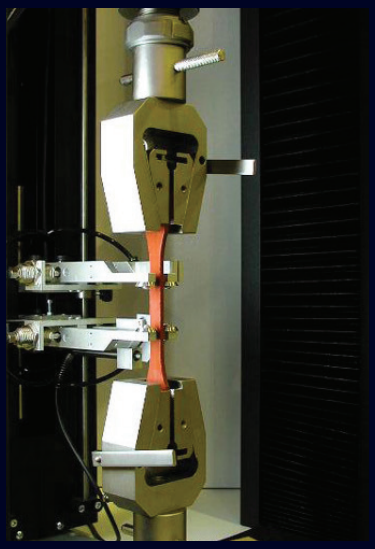
As the characteristics of plastics are influenced by external temperature changes, testing should also be conducted at high and low temperatures. Extereme temperatures can be achieved in environmental chambers, which provide the conditions of real-world applications. For tensile testing, laser and video extensometers are also used for high temperature strain measurements as well as for plastics materials that are sensitive to contact stresses or contamination.

Universal Testing Machines

www.WorldofTest.com/utm.htm

Use of Universal Testing Machines in the Plastics Industry

Tensile testing is the most basic and common plastics test method, which provides data on ultimate strength, modulus, elongation, toughness, and yield strength to meet various North American and international standards such as ASTM D638. Tests to determine the bending and flexural properties of both rigid and semi-rigid plastics are also performed for manufacturing products that meet ASTM D790 and other international test methods. Compression tests are very important for many molded parts as per ASTM D695 and other similar international standards, which is commonly used to evaluate foams and other packaging materials.



Q-Series Advanced Universal Testing Machines

The Q-Series Universal Tensile/Compression Testing Machines, with a stylish look and state-of-the-art design, fulfill the needs of quality-testing professionals and machine operators in the plastics industry.

The Q-Series UTMs have high resolution displays and the capability to extend the load cell user field to 1/500, which allows users to perform accurate tests at very low loads, enabling the widest range of coverage with a single load cell.

Other advantages of the new Q-Series models include a minimum test speed of 0.0005 mm/min. and a stroke reading of 0.5 µm.

Programming tests and monitoring results can be performed through the powerful and intelligent GraphWork test software, which facilitates comprehensive data management in accordance with North American and international test standards. The advanced, modular software comes with a comprehensive library of test standards in accordance with American Society for Testing and Materials (ASTM) and international norms — included at no extra cost.

The low-cost single column UTM model Q2.5 also comes with an integrated control console with high definition backlit display, and can be optimized with the advanced GraphWork software.

Table-top Q-Series Universal Testing Machines	
Models	**Capacity**
Q2.5 Single Column	2.5 kN / 550 lbf / 250 kgf
Q5 Double Column	5 kN / 1,100 lbf / 500 kgf
Q10 Double Column	10 kN / 2,200 lbf / 1,000 kgf
Q25 Double Column	25 kN / 5,500 lbf / 2,500 kgf
Q50 Double Column	50 kN / 11,000 lbf / 5,000 kgf
Q100 Double Column	100 kN / 22,000 lbf / 10,000 kgf

QM-Series Universal Testing Machines	
Models	**Capacity**
QM2	2 kN / 450 lbf / 200 kgf
QM5	5 kN / 1,100 lbf / 500 kgf
QM10	10 kN / 2,200 lbf / 1,000 kgf
QM20	20 kN / 4,100 lbf / 2,000 kgf
QM50	50 kN / 11,000 lbf / 5,000 kgf
QM100	100 kN / 22,000 lbf / 10,000 kgf

Q2.5 Single Column UTM

Q25 UTM w/ optional Extensometer

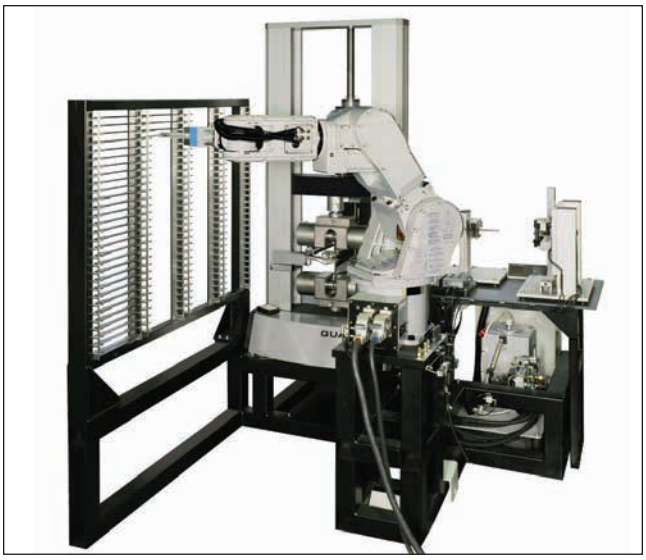
Universal Testing Machines

www.WorldofTest.com/utm.htm

For the plastics and polymer industry, Universal Testing Machines that can calculate up to 100kN load frames are normally used. Qualitest's Q-Series UTMs are available with capacities up to 2,000 kN (440,000 lbf) in electro-mechanical design. These units are used for higher strength materials such as metals and composites. Qualitest also offers extended height or width load frames for oversized samples.

We offer a wide range of tensile grips such as pneumatic, wedge, eccentric roller, pincer, and screw grips with various jaw inserts to guarantee the optimum performance and test results. In addition to tensile grips, fixtures for other applications such as compression, 3 or 4 point flexure, COF, Peel, Shear, tear tests, as well as installing extensometers, temperature chambers, and load cells.

As a top-of-the-line solution for high-volume and in-line testing, Qualitest offers fully automated testing systems in two models: Compact Line, a cost-effective system for low to medium testing requirements, or the Multi-Line for the most efficient automation technology in the most demanding and highest volume testing environments.



Automatic Handling Universal Testing Machines

Q25 UTM w/ optional Temperature Chamber

Tear Test

GraphWork Software Package
Advanced and Intelligent Test and Control Software

The advanced GraphWork 5.0 test software provides the ultimate control and most user-friendly interface for your test applications. The comprehensive and modular structure of this software allows users to implement any of the most common standard test programs according to standards such as ASTM, ISO, DIN, EN, JIS, etc., or simply create a new customized test programs for unique samples.

The latest version of the GraphWork software package comes complete with:

- Language selection
- Test method and standard settings
- Starting and controlling tests
- Analysis of results
- Printing certificates and protocols
- Graphic post-analysis of tests
- Statistical analysis of tests

QM Series Universal Testing Machines

With a highly rigid construction and precision servo motor drive components, the QM-Series Universal Testing Machine can satisfy requirements for many kinds of material tests. Using specialized testing software, the unit can perform tensile tests, compression tests, bending tests as well as peeling tests. The software is multilingual and is designed to be used with ease. It also analyzes different metric units, produces real-time graphs, and performs complete material analysis.

The QM-Series has a two-column design for better stability and rigidity. The machine's stroke can be extended and the elongation factor can be as high as 800% with successful tests, depending on the material.

The QM-Series Universal Testing Machine has an ergonomic design and is suitable for production lines, where the operator has to be fast and efficient to accurately control the test. This equipment is also used in testing lab environments, where advanced software helps the operator to analyze the test data.

The Universal Testing Machine (UTM) is used to test both the tensile and compressive strength of materials. Universal Testing Machines are true to their name, performing many varieties of tests on an extensive range of materials, components, and structures. Most UTM models are modular, and can be adapted to fit the customer's needs.

Universal Testing Machines can accommodate many kinds of materials, ranging from hard samples, such as metals and concrete, to flexible samples, such as rubber and textiles. This diversity makes the Universal Testing Machine relevant to virtually any manufacturing industry.

The UTM is a versatile and valuable piece of testing equipment that can evaluate materials properties such as tensile strength, elasticity, compression, yield strength, elastic and plastic deformation, bend compression, and strain hardening. Different models of Universal Testing Machines have different load capacities, some as low as 2 kN and others as high as 3,000 kN.

Universal Force Test Systems

QSOFT Control Software

QSOFT is the software used to control the Universal Testing Machine. The Tester and the software are designed to accommodate a wide variety of testing needs. The software has a variety of preset programmed test cycles for compression, tensile, and cyclical testing to meet a range of testing standards.

This software has the following capabilities:
- Selection of communication language
- Setting of test methods
- Test execution
- Analysis of the results
- Printing of the certificates
- Graphic post-analysis of the tests
- Statistical analysis of the tests

A powerful software engine helps the operator to set up and connect accessories to the equipment in many phases. It includes a package of pre-loaded methods according to the main international reference standards for different types of material to perform the following tests:
- Traction
- Compression
- Flexure
- Cycles
- Spring tests

The structure of the software is very flexible, giving companies the capacity to personalize the tests while still achieving the proper credentials. With Qualitest's software, companies can:
- Create custom tests.
- Customize the certificate.
- Print the certificate with a company logo.
- Print the stored certificates anytime in the future, for single tests or as a summarizing certificate.
- Analyze a test anytime in the future.
- Store results for future calculation to use factors that were not selected at the moment of the test execution (more than 500 standard results can be determined by reanalyzing data)

To build a custom test, operators can:
- Create a new method
- Share the test process in "phases" (up to 20 max.) that can be identified by numbers or descriptions. For each of them, it is possible to set the control type (load, deformation, and speed), the storing frequency, etc.
- Real-time display of characteristics such as load, stroke deformation, load gradient, crosshead speed, and time (up to a maximum of 3 parameters).
- Selection of the load measuring unit (kN, N, daN, kgf, lbs, etc.)
- Selection of the measuring unit of the stress, according to the load (N/mm2, Mpa, N/mm, etc).
- Selection of the deformation measuring unit (m, mm, inch, etc)
- Selection of the representing units of axis for diagrams (load, deformation, epsilon, sigma, time, crosshead stroke, stress, strain, and possibility to define personalized axis)
- Geometric features of the specimen for the automatic calculation of the area.
- Displaying the results in a list according to the different types of possible tests and materials. For many results, it is possible to define more calculation variables. For each of them, it is possible to modify the description.
- Possibility to display 2 curves at the same time during the test.
- Possibility of a direct connection with Microsoft Excel to obtain the results

Model / Specification	QM-2	QM-5	QM-10	QM-20	QM-50	QM-100
Capacity (kN):	2	5	10	20	50	100
Measuring Accuracy (%):	±0.5					
Test Force Resolution:	1/20,000	1/20,000 or 1/10,000	1/10,000	1/20,000 or 1/10,000	1/20,000 or 1/10,000	1/20,000 or 1/10,000
Total Cross-Head Movement (mm):	400 or 800		650 or 1,100	800 or 1,200	1,000 or 1,100	1,000
Stroke Resolution (mm):	0.0001					
Speed Range (mm / min):	25 - 500	0.1 - 1,000	0.03 - 1,000	0.1 - 800	0.1 - 600	0.05 - 375
Testing Space (mm):	Ø 140	Ø 140	410	425 (optional 550, 680, 880)	420	550
PC-Port:	USB		TCP / IP	USB		
Hardware Safety Protection	Up / down limit, emergency stop button					
Motor Type:	Servo Motor					
Power:	110 / 220V AC, 5A					

Universal Force Test Systems

MT Series - www.WorldofTest.com/mt-series.htm

MT1500

In the past, film and paper producers have used ineffective caliper gauges which were either value-priced, thickness-only machines, or expensive computer- operated machines. Now you can have combine these features in a single instrument. The MX-series MicroGauges are simple to operate and, with stand-alone or PC-operated testers, Quality Control software facilitates automatic calculation and graphical display of thickness profiles, statistics, and other information.

Advantages
Meets ASTM D882 Standard Test Method for Tensile Testing of Plastic Film, and ASTM D3354 for Blocking Testing of Plastic Film and Sheet

This product comes in two models: a stand-alone, manual system, or a digital model that uses MT-500 Force Test Software to automatically calculate force values.

Improved Film & Paper Quality, Increased Profit Margins
The MT-500 Series Force Test Stand is a proven tool for more closely controlling nominal and peak strength and elongation characteristics to accelerate:

- Research and development of new film and paper products
- Inspection of incoming film and paper products
- In-process checks to ensure on-spec product for converting operations
- Quality-control reporting

ESM301

The ESM301 is a highly configurable motorized test stand for tension and compression testing applications up to 300 lb (1.5 kN). The ESM301 is engineered on a unique modular platform, allowing companies to customize the configuration.

Integrated travel indication, overload protection, and a host of programmable parameters makes the ESM301 quite sophisticated, while its intuitive menu structure allows for quick, simple setup and operation.

With a rugged and modular design, the ESM301 is a compelling solution for applications in laboratory and production environments.

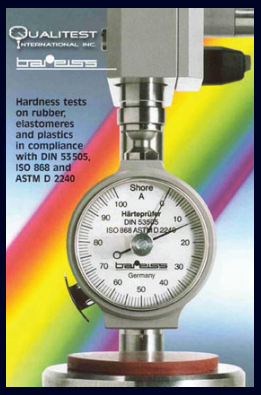
Load capacity:
- 300 lb (1.5 kN) @ up to 24 in/min (610 mm/min)
- 200 lb (1 kN) @ >24 in/min (610 mm/min)

Maximum travel distance:
- ESM301: 11.5 in (292 mm)
- ESM301L: 18 in (457 mm)

Model / Specification:	**MT-1516 / MT-1522 / MT-1528 / MT-1540 / MT-1552**	**MT-516 / MT-522 / MT-528**
Capacity:	550 lb (2.5 kN) / 550 lb (2.5 kN) / 220 lb (1.0 kN) / 550 lb (2.5 kN) / 220 lb (1.0 kN)	550 lb (2.5 kN) / 550 lb (2.5 kN) / 220 lb (1.0 kN)
Measurement Range:	0 - 2.2 lb (10 N / 1,000 g) 0 - 10 lb (50 N / 4,500 g) 0 - 50 lb (200 N) 0 - 100 lb (500 N) 0 - 150 lb (700 N) 0 - 250 lb (1,000 N) (other ranges available)	0 - 250 g, 0 - 500 g 0 - 2 kg (4.4 lb) 0 - 5 kg (11 lb) 0 - 20 kg (44 lb) 0 - 100 kg (220 lb)
Crosshead Travel:	22.0 Inches / 28.0 Inches / 34.0 Inches / 46.0 Inches / 58.0 inches	22.0 Inches / 28.0 Inches / 34.0 Inches
Test Travel:	16.0 Inches / 22.0 Inches / 28.0 Inches / 40.0 Inches / 52.0 Inches	16.0 Inches / 22.0 Inches / 28.0 Inches
Mode of Operation:	Off-line testing / lab use and digital force measurement	
Load Cell Mounting Options / Force Gauge Mounting Option:	Front Mounted or Right Hand over Work Table (Factory preset)	
Throat Depth:	2.0 - 5.0 inch, adjustable	
Materials:	All Sheet Materials	
Measurement Accuracy:	±0.02% Full Scale	±0.10% Full Scale
Measurement Resolution:	0.01 lb / 0.001 lb (Range Dependent)	0.001 - 0.1 lb (Range Dependent)
Speed Range:	0.1 - 40 ipm	1.0 - 30 ipm, (2.0 - 60 ipm Optional), (0.2 - 6.0 ipm Optional), Digital 7-segment LED 3-1/2 digit
Speed Accuracy:	±0.01 ipm	±2% Full Capacity
Return Speeds:	Maximum / Jog Speed	Maximum or Dial Speed
Sample Rate:	1000 / sec.	
Power Requirements:	115 VAC, 60 Hz, 230 VAC, 50 Hz, or consult factory for special requirements	
Overall Height / Wt:	34 inch & 70 lb / 40 inch & 75 lb / 46 inch & 80 lb / 58 inch & 90 lb / 70 inch & 100 lb	34 inch & 70 lb / 40 inch & 75 lb / 46 inch & 80 lb
Serial Data Communications:	RS-232, 9-pin D-Sub (2) or USB Serial Adapter (2)	RS-232, 9-pin D-Sub (1)

Durometers: Shore & IRHD Hardness Testers

Portable Models


QUALITEST
INTERNATIONAL INC.
Hardness tests on rubber, elastomeres and plastics in compliance with DIN 53505, ISO 868 and ASTM D 2240
Shore A
Härteprüfer
DIN 53505
ISO 868 ASTM D 2240
Germany

HP-Series Analog Durometer
www.WorldofTest.com/durometer.htm

Our range of HP Durometers are suitable for accurate hardness measurement of all natural and synthetic rubber products, plastics, acrylic glass, acetates, casting resin, polyester, themoplastics, PVC, neoprenes, hardboards, wood, leather, and even fruits. These tests can determine whether samples are within the Shore A, D, B, O, OO, OOO, C, DO scales.

These durometers are the highest precision models on the market with very easy handling. HP Durometers can be used as portable instruments and as benchtop units. All of our analog durometers have an antiglare scale with graduation between 0-100. The most important advantage of these handy analog durometers is the precise indication of their measured values, due to the unique design of the spring mechanism.

Our durometer line is optionally available with a maximum indicating pointer. This feature makes the maximum value easier to read and allows the determination of the flow characteristics of the material after a certain test time. The type A durometer, combined with the screw-on loading weight according to ASTM D 2240 and DIN 53505, guarantees a constant measuring result.

BS 61 Test Stand is an ideal accessory to be used with our HP Durometers for higher volume benchtop measurements. The pick-up device allows a quick and easy mounting of the durometer. The built-in loading device for hardness tests within Shore A range guarantees a constant pressure as prescribed in DIN 53505 and ASTM D 2204. The hardness results can be measured without subjective influences because of this constant load.

HPE-II Digital Durometers
www.WorldofTest.com/hpe.htm

HP-E II Series Durometers are high-end hardness testers for accurate and repeatable hardness measurement of rubber, plastics, and other elastomers within the Shore A, D, B, O, OO, OOO, C, DO scales.

The new generation of HPE offers an extended range of applications as well as a new innovative radio data communication feature, which makes the HPE Series the most technologically advanced digital durometers on the market at a reasonable price.

HPE II can be conveniently used for any vertical or horizontal testing, and can also access hard-to-reach areas. This unit can be used with the optional test stand as a benchtop laboratory instrument.

Its patented pressure mechanism ensures a constant contact pressure according to international standards, eliminating measuring errors caused and influenced by tilting or slope contact. The measuring time can be adjusted to test a sample for 0-99 seconds. The measured value will be stored on the display until the next measurement, and subsequently the measured value can be transferred to PC or printer via the RS232-interface.

P&J Plastometer
www.WorldofTest.com/puseyandjones.htm

Our top-of-the-line Pusey & Jones (P&J) hardness tester (Plastometer) is the most popular model on the market for determining the penetration depth on rubber and elastomer materials such as rubber rollers, standard blocks made of rubber, and paper rollers.

The electronic dial gauge is integrated in the instrument and shows the indentation depth to an accuracy of 3 decimal places (0.000 mm). With the help of a vertical spindle which is integrated on the back of instrument, the dial gauge can be moved up to perform tests conveniently and precisely.

The maximum load of 9,8 N is applied by lowering the loading lever on the right side. The test result can be reached in only 60 seconds. With the user-friendly design of our P&J hardness tester, you can perform easy, quick, and repeatable measurements under heavy loads.

HPE - Digital Barcol Hardness Tester
www.WorldofTest.com/barcol.htm

Available in both analog and digital models, this Barcol Hardness Tester accurately analyzes aluminum, glass-reinforced plastics, duro plastics, hard thermo plastics, semifinished and finished products. These models are highly popular portable hardness testers. Compliant with the National Fire Protection Association (NFPA1932), the Barcol hardness tester is a proven device for field testing of fire ladders after being exposed to high temperatures.

Durometers: Shore & IRHD Hardness Testers

Benchtop Models

DigiTest Automatic Motorized Shore / IRHD Hardness Tester
www.WorldofTest.com/digitest.htm

DigiTest offers the highest level of precision for repeatable results for hardness measurement in any of Durometer A/D/B/C/DO/ OO/OOO/Micro A/ Micro D as well as IRHD Micro/ Normal/ Soft/ Supersoft scales.

The modular construction of DigiTest allows the users to configure its setup to meet their basic needs in the most cost-effective way, with the possibility of upgrading their system with additional measuring heads according to any of Durometer or IRHD scales at any time. With the help of a newly developed plug-in system, all of the measuring heads are plugged into the pick-up bracket and are installed automatically.

DigiTest eliminates the operator's influence on the test results, and thus ensures the highest precision and repeatability for your measurements.

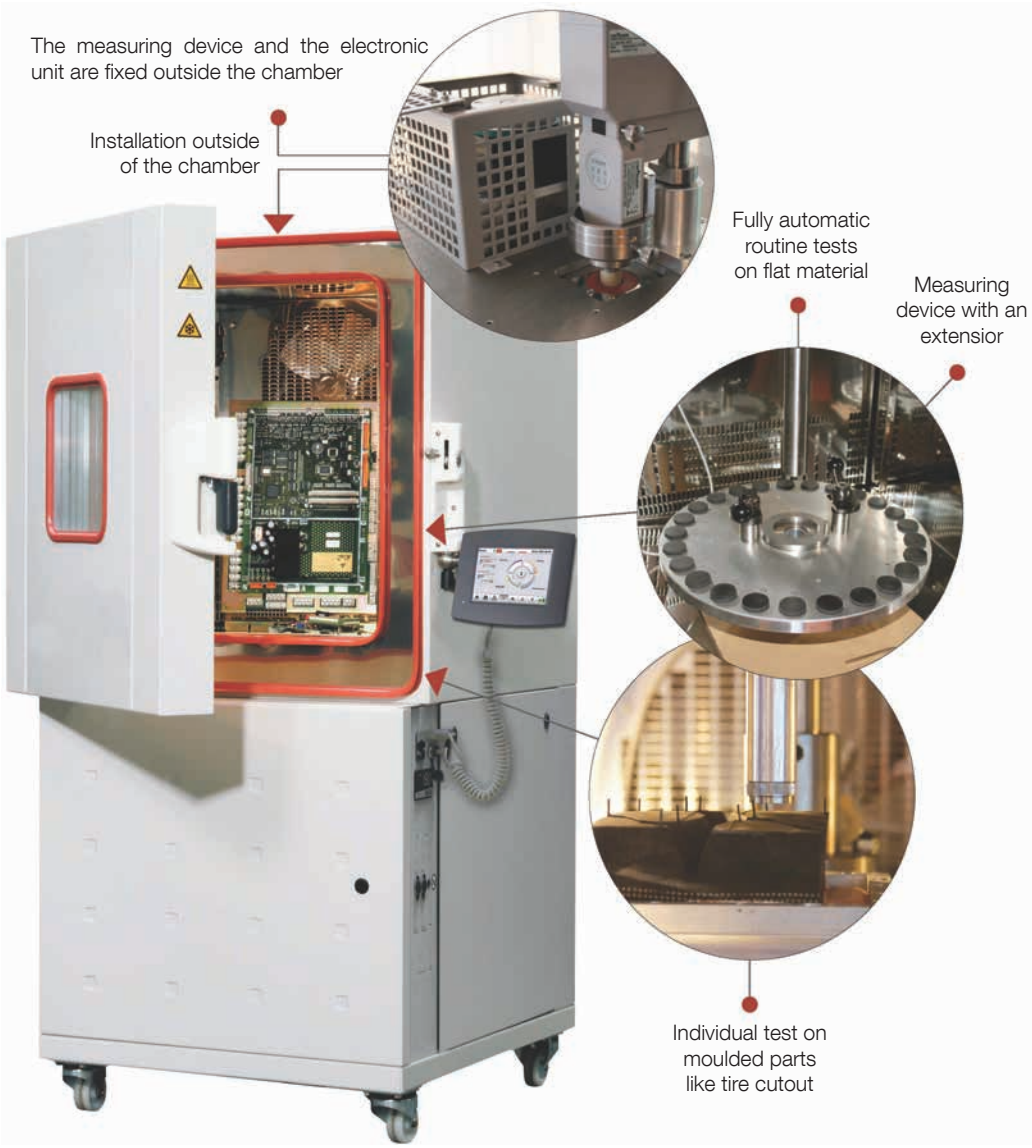
Whether the shapes of samples are flat or uneven, or if a company wants to measure the hardness of specific components such as O-rings, Gaskets, etc., Qualitest has the most suitable options in our stockroom. With the optional HardTest software, companies can easily transfer, analyze, and archive measuring results into any database.

The Automatic DigiTest system fully meets or exceeds International standards according to: ASTM D 2240, ASTM D 1415, DIN 53505, DIN 53519 sheet 1,2, ISO 868, ISO 48, NFT 51 123, NFT 46 003, and BS 903 Part. A 26.

DigiChamber
www.WorldofTest.com/digichamber.htm

The revolutionary DigiChamber consists of a DigiTest II hardness tester and a temperature chamber, which allows tests to be carried out at above or below ambient temperature. With the function of temperature control, the specimen can be examined to determine its hardness changes in extreme temperature conditions. This kind of test is ideal for automobile and tire industries, as most of the rubber parts are required to sustain critical temperature changes. The entire system can be controlled by a touch panel with coloured display. The DigiChamber operates according to the standard DIN 53505, for which:

- A chamber is provided to test samples in an automated temperature controlled environment; and
- Test pieces, supports, an indenter, and a pressure foot can all be placed in the chamber while the DigiTest Control Device remains outside the chamber at ambient temperature.


The measuring device and the electronic unit are fixed outside the chamber
Installation outside of the chamber
Fully automatic routine tests on flat material
Measuring device with an extensior
Individual test on moulded parts like tire cutout

Charpy / Izod Impact Testers

Charpy Impact
Test Configuration

Izod Impact
Test Configuration

Q-IMPACT 25 Pendulum Impact Tester
www.WorldofTest.com/q-impact.htm

The Q-Impact advanced Pendulum Charpy / Izod Impact Tester, available with energies from 1.75 to 25 Joules, is designed to determine the Charpy & Izod Impact strength of plastics and other materials. This sophisticated pendulum is controlled by a microprocessor which controls all the functions and the test protocols according to major International standards.

Q-Impact also comes complete with the self-calibration feature as well as an automatic function which compensates and corrects friction levels during the tests. All the test data can be sent directly to a printer or to software on a PC.

The hammer can be stopped automatically in different positions by setting a special function on the console. This feature allows the operator to analyze the specimen after the pendulum hammer has passed. Q-Impact can also be instrumented for the dynamic analysis of the energy absorbed during the impact.

For the operator's protection, this stylish instrument includes an electrically interlocked safety door.

The control system includes an LCD display for test parameters. The test type as per ASTM/ISO standards and many other features, making this system the most user-friendly Pendulum impact tester on the market.

Q-Impact 50
www.WorldofTest.com/q-impact50.htm

The Q-Impact 50 High Performance Charpy/ Izod Impact Tester is a high-performance impact tester designed to precisely determine the absorbed impact energy and resistance to breakage for plastic specimens. The tester conforms to both ASTM and ISO standards. The innovative design allows this tester to be used for both Izod and Charpy tests. The maximum capacity of this tester is 22J (Izod) and 50J (Charpy).

- Striker and weights for Izod testing: 5.5J, 11J 22J.
- Striker and weights for Charpy testing: 7.5J, 15J, 25J, 50J
- Safety Cage
- Software

QPI Analog Izod/Charpy Impact Tester
www.WorldofTest.com/qpi.htm

QPI-IC Basic Izod/Charpy Impact Tester is a low-cost unit which determines the energy required to break standard plastics impact specimens. Meeting ASTM D256 standard test method, this apparatus includes both Izod and Charpy configurations for impact test on plastic specimens in two different energy groups (3/6/9J or 7/14/21J).

QPI-IC is a universal mechanical unit designed for simple impact energy scales.

This tester is highly customizable depending on the required standards (ASTM D256, D6110, ISO 179, and 180). Each standard requires a specific vice and hammers for the machine, which can be chosen as required.

Notcher for Impact Test Specifimens
www.WorldofTest.com/notcher.htm

The Notcher for Impact Test Specimen machine can cut various depths for V shapes according to standards. To produce IZOD and CHARPY specimens, the user will cut a V angle along the middle of the specimen to prepare the material. The cutting speed of the Notcher for Impact Test Specimens machine can be adjusted according to the material of the specimen, as well as for different angle depths, where the user can adjust or change the shape of the cutting tool to produce different angle cuts.

Drop Impact Testers & Plastics Pipe Testing Instruments

FWP-Series Falling Weight Impact Tester
www.WorldofTest.com/dropweightimpact.htm

Model FWP-300C: Test pieces are subjected to blows from a falling striker of a specified mass and shape, dropped from a known height onto specified positions around the circumference of the test piece. The true impact rate of the batch, or production run from an extruder, is estimated. This equipment meets ISO 3127, EN744, and EN1411 standards.

Model FWP-300D: Mainly used to determine of the impact resistance of thermoplastic pipes and fittings under specified conditions of impact by means of a tup (falling weight). Three interchangeable striking noses are used on the tup.

Model FWP-300E: Mainly used to perform impact tests on plastic pipes. It conforms to ISO 3127.

Gardner Impact Testers
www.WorldofTest.com/gardner.htm

Gardner impact testers have gained wide acceptance as a means of testing the impact resistance of many types of coatings from paints and vanishes to tough plated, plastic, or laminated coatings. Qualitest's Gardner Impact Tester is also used to establish quality standards for resistance to impact surface damage and penetration of many construction materials such as resins, fibreglass, sheet metals, plywood, etc.

Light Duty Gardner Impact Tester
Maximum force of 28-inch-pound

Heavy-Duty Gardner Impact Tester
Maximum allowable force of 80 and 160 inch-pound

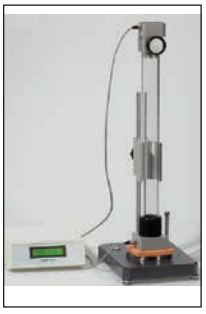
Extra Heavy-Duty Gardner Impact Tester
Maximum force of 320 inch-pounds

Drop Dart Impact Tester
www.WorldofTest.com/dropdart.htm

Series DX-8000 Dart Impact testers are full-featured models for free falling dart impact testing of plastic film and sheet materials. The series 8000 Dart Impact Tester is a proven tool for more closely controlling nominal and peak strength characteristics to speed your production, additives settings, adjustments, research and development, inspection of incoming products, and in-process checks.

Meets specifications of ASTM D1709 Methods A&B Standard Test
Method for Free Falling Dart Impact Testing of Plastic Film.

- Manual, Electro-Mechanical, or Pneumatic-Assisted Operation
- Three versions of operation available: Operate as a manual system, upgrade to Electro-Mechanical or with pneumatic-assist for dart release, and film/sheet sample clamping.



Ball Rebound Tester
WorldofTest.com/ballreboundtester.htm

The microcomputer controlled Ball Rebound Tester is designed to determine the rebound elasticity of foam materials according to ASTM D 3574 and DIN EN ISO 8307.

Thermal Recycling Testers for Plastic Pipes - ISO 10508, ASTM F 1335
www.WorldofTest.com/recycling-system.htm

The Thermal Recycling Tester for Plastic Pipes is mainly used to determine the leakage status of composite pipes & fittings when subjected to specified cycling times under specified internal pressure loads.

RST30 - Ring Stiffness Tester
www.WorldofTest.com/ringstiffness.htm

Qualitest's Ring Stiffness Tester is designed to measure the ring stiffness, ring softness, and creep rate for plastic pipes. The unique design makes this tester especially suitable for large diameter pipes. The RST30 features built-in measurement of the inner diameter of the pipe and the compression plate load-cell interface is designed to reduce the risk of damaging the load cell during testing. The rigid compression plates ensure the results will be free of machine deflection and increases the accuracy of the test results.

Plastics Pipe Testing Instruments

www.WorldofTest.com/hydrostaticpressuretesting.htm

HPT-Series Hydrostatic Pressure Testers

The HPT-10A series Hydrostatic Pressure Tester is mainly used to determine time-to-failure of plastic pipes under constant internal pressure according to ISO 1167 and ASTM D 1598 standards.

For these units, a fast processor and corresponding software supports the automatic adjustment of the pressure in the test samples. The test parameters can be set in via the touch screen, where the operator can also follow the real-time test status.

Technical parameters:

- Pressure: 0-16MPa
- Pressure controlling Accuracy: +2% -1%
- Display Accuracy of the Pressure: 0.001MPa
- The Temperature Range of the test tank: Room temp.~95°C or 15°C to room temperature
- The Temperature Controlling Accuracy of the test tank: ±1°
- The Working Time of the Timer: 0-10000h
- The Interface of Pressure: one to twenty(Upon order)
- Enclosure: suitable for Ø16 to Ø630mm diameter pipes and fittings.
- Power Supply: 380 V/220 V
- Max Power: 6-30 kW

HPT-10b Burst Tester

The HPT-10B tester is used to determine the resistance of thermoplastic or reinforced thermosetting resin pipes, tubing, or fittings to hydrostatic pressure in a short time period.

This unit is used to determine burst pressure of a specimen if the mode of failure is to be determined, or to determine whether a specimen complies with a minimum burst requirement. The machine increases the pressure uniformly and continuously until the specimen fails. If the failure time is less than 60 seconds, the operator can reduce the rate of the loading and repeat the test.

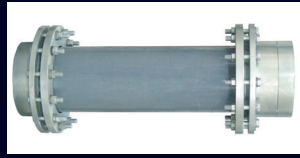
Standard: ASTM D 1599

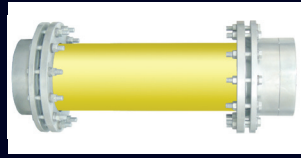
Test tank for hydrostatic pressure tester

Our test tank for hydrostatic pressure tester is made of stainless steel and has a 100 mm thickness heat-protection layer. There are two cycling pumps inside the test tank, which helps support the temperature control system, with an accuracy of ±2. The lid of the test tank could be opened automatically via a pneumatic device. The size and the interface of the test tank can be customized based on customer's requirements.

End Closures

Qualitest offers an extensive range of End Closures suitable for various diameters according to ASTM, ISO, DIN, and other standards.





Sample Specimen Preparation

www.WorldofTest.com/sample-specimen-preparation-equipment.htm

SpeciCut II-P

www.WorldofTest.com/specicut-ii-p-sample-preparation-machine.htm

Hard Plastic Tensile Specimen Cutting Machine
The Sample Preparation Machine - SpeciCut II-P is a manually operated, economical way to prepare tensile bars and other samples. This sample preparation machine includes integral misting, chip removal, and motor speed regulation units. The chip shield around the control head protects the area around the unit from debris, while the sound-deadening package absorbs much of the noise of the unit.

The SpeciCut II-P can test samples with thicknesses up to 60 mm according to ASTM standards.

Application: For plastics only.

SpeciCut III

www.WorldofTest.com/specicut-iii-sample-preparation-machine.htm

CNC Sample Preparation Machine
The SpeciCut III CNC sample preparation machine has motion control applications for up to 3 axes. The operator only needs a USB cable to communicate between the PC and control board, which can be easily customized as per user preference.

Application:
SpeciCut III-M: Ferrous & Non- Ferrous metals and Plastics
SpeciCut III-T: Non- Ferrous metals, Steel, Titanium, steel alloys, etc.

SpeciCut IV

www.WorldofTest.com/specicut-iv-sample-preparation-machine.htm

CNC Sample Preparation Machine - Flat Samples
The CNC Sample Preparation Machine - SpeciCut IV - Flat Samples is a PC-controlled system capable of controlling all 4 axes.

Application: Non- Ferrous metals (Aluminum, Brass) and Plastics

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SpeciLathe I

www.WorldofTest.com/specicut-iv-sample-preparation-machine.htm

Mini NC Lathe - Round or bar type samples
The Mini NC Lathe - SpeciLathe I is a Compact NC Lathe for various metals and non-metals. The motion control is based on numerical control technology, which is programmable for a range of specimens. The Turret head and the tail stock features in the lathe enable the operator to reach high spindle speeds of 4000 rpm. The safety cover protects the operator from dust and noise.

Application:
SpeciLathe I-N - Round or Bar type samples
SpeciLathe I-NS - Threaded Round or Bar type samples

SpeciLathe II

www.WorldofTest.com/specilathe-ii-mini-nc-lathe.htm

The Mini NC Lathe - SpeciLathe II is used for sample preparation of various metals and non-metals. It employs an integral microcomputer to prepare those specimens, which we have pre-programmed in accordance with the customer's requirements. The Turret head and the tail stock in the lathe enable to operate the machine for various purposes.

Application: Round or Bar type samples

Molding Press for Plastics Sample Preparation

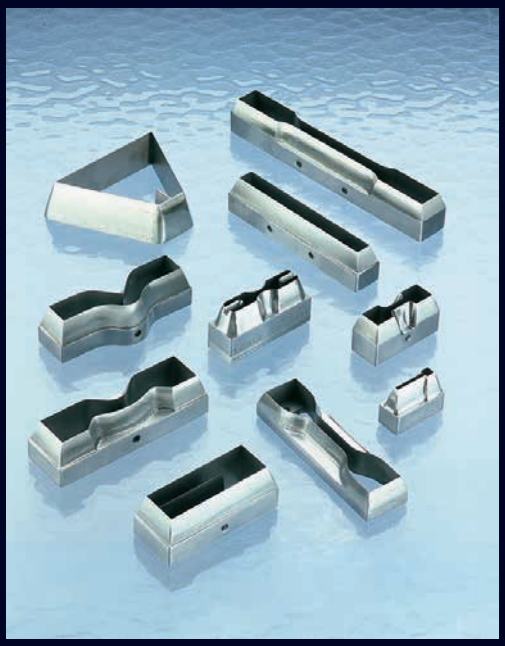
www.WorldofTest.com/moldingpress.htm

Proper sample preparation will achieve accurate and consistent results. Most variation in testing occurs before the test is performed, as sample preparation plays a major role in final results. These machines are convenient for preparing samples as they ensure uniform process and save time.

- Increase efficiency by decreasing sample preparation time
- Simple to use equipment
- Durable and simple design
- Widely used in the automotive, plastics, rubber, and textile industry
- Capacities from 10 tons to 50 tons
- Available in manual and hydraulic models

Specimen Dies & Clicker Presses

www.WorldofTest.com/dies-molds.htm



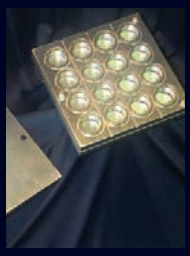
Specimen Dies
Fully Certified ASTM, DIN and ISO dies.

Miscellaneous
ISO 34 A
ISO 34 B
ISO 37, Type 1 through 4
ISO/DIS 3167
.250 x 5.0
.500 x 5.0
1.000 x 6.0

DIN Standard
DIN 53504 S1
DIN 53504 S2
DIN 53504 S3
DIN 53504 S3A

Accessories
Mallet Handles
Shanks
Adaptors
Sharpening, Calibration & Certification

ASTM Standard
ASTM D-412 A Tensile Sample Cutting Die
ASTM D-412 B Tensile Sample Cutting Die
ASTM D-412 C Tensile Sample Cutting Die
ASTM D-412 D Tensile Sample Cutting Die
ASTM D-412 F Tensile Sample Cutting Die
ASTM D-638 Type I Tensile Die
ASTM D-638 Type II Tensile Die
ASTM D-638 Type III Tensile Die
ASTM D-638 Type IV Tensile Die
ASTM D-638 Type V Tensile Die
ASTM D-1822-S
ASTM D-1822 L
ASTM D-1708 Microtensile Die
ASTM D-624 B Tear Sample Cutting Die
ASTM D-624 C Tear Sample Cutting Die
ASTM D-624 T Tear Sample Cutting Die
ASTM D-1004
ASTM D-1922
ASTM D-746
ASTM D-746 T50
ASTM D-1938
ASTM D-2209 Leather Tensile
ASTM D-2212 Leather Slit Tear
Other ASTM Dies Available Upon Request



Specimen Molds

Our molds are made of P20 tool steel that is hardened, ground, and polished, then chrome-plated with the option of teflon coating. Typical molds have one to four cavities. Various sizes are available. Test specimens are cut to uniform thickness. All of the molds meet many national and international standards such as ASTM, DIN, and ISO.

Manual Test Sample Clicker Press

These units operate well in stand-alone cutting situations, and also compliment a Hydraulic press for smaller operations. With the single lever rotation and compressing action, its operating speed exceeds industry standards and costs a fraction of the price of a hydraulic press.

Auto-Pneumatic Clicker Press

This low-cost and high-quality Pneumatic clicker press only requires air to operate and is widely used in the rubber and plastics industry for accurately cutting rubber, leather, and plastics specimens. The Auto-Pneumatic clicker press is available in 3 or 5 ton capacities, which can be used to cut rubber samples with thickness up to 10 or 15mm. This unit is a compact and cost-effective solution for any testing laboratory.

Model SE-Series Laboratory Sized Swing Arm Clicker Press

The SE-8 Hydraulic Mini-Clicker cuts exact (dumbells, etc.) samples from split-layered materials. The SE-8 automatically adjusts the stroke to the proper cutting height. With eight ton cutting pressure, this useful laboratory tool requires a minimum of floor space and is highly recommended for medium to high specimen cutting needs.

- Cutting Surface: 12” x 24”
- Cutting Arm: 10” x 14”
- Floor Space: 24” x 25”
- Tonnage: 8 Tons (Optionally 20, 22 , and 25 Tons available)

MFI, Capillary Rheometer, HDT / VICAT & LME

Melt Flow Indexer - 2000 / 3000 Series
www.WorldofTest.com/mfi.htm

MFI-2000 series Melt Flow Indexers are affordable benchtop units that measure the melt mass-flow rate (MFR) and melt volume-flow rate (MVR) of a wide range of thermoplastic raw materials (granulate). The tester conforms to all National and International Melt Flow Resistance standards, including ISO1133 and ASTM D1238. Any temperature within 120° - 450°C (248° - 842°F) can be accurately controlled.

With integrated touch panel display, Qualitest's Melt Flow Indexers measure the melt mass-flow rate (MFR), melt volume-flow rate (MVR), as well as Melt density test according to the standards ASTM D1238 (A & B Methods), and ISO1133.

This series has an automatic control system for auto-weight loading.

Melt Flow Indexer - 5000 Series
www.WorldofTest.com/mfi.htm

The LMI 5000 series are highly precise melt testing instruments for the measurement of melt flow rate (MFR) or melt volume rate (MVR) in quality control and research applications. The LMI 5000 is the first melt flow indexer to utilize a powerful 32 bit microprocessor to provide test parameter control, self-diagnostics, and digital calibration. The on-board computer controls and displays temperature to ± 0.1°C using a unique PID control algorithm.

Capillary Rheometers
www.WorldofTest.com/capillary.htm

The Capillary Rheometer, also known as a viscometer, is the most common device for measuring viscosity. Gravity, compressed gas, or a piston is used to generate pressure on the test fluid in a reservoir. The pressure drop and flow rate is measured through a tube that is connected through the capillary tube to the bottom of the reservoir. Our capillary rheometers offer ergonomic design, advanced features, high accuracy, ease-of-use, and robust software to provide the most control for tests.

HDT1 Heat Deflection Tester
www.WorldofTest.com/hdt.htm

Heat Deflection Temperature Tester (HDT1) is a single station and low-cost system designed in accordance to ASTM D648 as well as ISO 75 to measure a material's ability to perform for a short time at elevated temperatures while supporting a load.

The test measures the effect of temperature on stiffness: a standard test specimen is given a defined surface stress and the temperature is raised at a uniform rate.

HV2000 - Vicat
www.WorldofTest.com/hdt.htm

The HV2000A HDT/Vicat tester is used for determining the temperature at which an arbitrary deformation occurs (HDT) and the temperature at which a specified needle penetration occurs (VICAT) when specimen are subjected to specified controlled test conditions. During the test, the screen will display the temperature and deformation of every specimen simultaneously.

Laboratory Mixer Extruder
www.WorldofTest.com/lme.htm

The LME Laboratory Mixing Extruder is a unique laboratory tool developed to evaluate the processability of a variety of plastics and rubbers prior to production. From very fine powders to coarse materials, the LME will meet many extruding needs. The rotational shearing of the LME system provides extensive and intensive mixing and can be used in the production of polymer blends or alloys. These blends have been found homogeneous enough to be spun into fibers over the entire range of composition.

Specific Gravity, Densimeters, Brittleness & Freezing

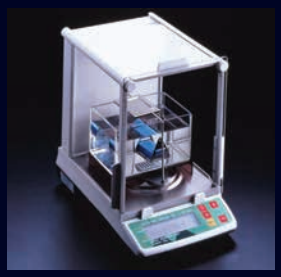
www.WorldofTest.com/specificgravity.htm

Electronic Densimeter EW-300SG

Takes only 10 seconds to measure density and volume — just put the sample into the water. Ideal machine for the interval testing of production line.

Electronic Densimeter MD-300S

Popular model with a resolution of 0.001g/cm3. Compact body and accurate density measurement for solid and liquid samples.



Densimeter SD-200L

Top precision model with density resolution at 4 decimel places for both Solid and Liquid samples.

Suitable for Plastic Pellets, Films, Rubbers, Fabric, advanced materials, and Liquid density in the Medical, Food, and Chemical sectors.

Densimeter MDS-300

Easy density measurement of not only solid and liquid sample density, but also new function of powder density measurement added with resolution of 0.001g/cm3 and reference value of 0.0001g/cm3. New designed Sensor and Auto-weighing function improve accuracy and working efficiency.

Densimeter MDS-3000

MDS-3000 can measure maximum capacity up to 3kg. Wide measuring capacity enables to measure the samples without cutting, and it gives the whole sample average density. Sensor & Water tank size can be customized depending on the sample size. The easy and convenient "Auto-weighing Function" is a standard feature.

ET-05 (Advanced Model) Brittleness Point Temperature Tester
www.WorldofTest.com/brittleness.htm

The ET-05 Brittleness Point Temperature Tester is used for the automatic determination of Brittleness point according to ISO 812, ISO 974, ASTM D746 and ASTM D2137.

The test rig is raised by pneumatic cylinders, which require an air supply of 6 Bar. The brittleness tester is designed as a falling weight tester, where the speed is set by the height and the energy by the attached weights. The computer controls the temperature rise and measures the temperature at impact. The result from each stroke is measured after the impact to verify the speed loss during impact.

Brittleness Point Temperature Tester
www.WorldofTest.com/brittleness.htm

This test method covers the determination of the temperature at which rubber, plastics, and elastomers exhibit brittle failure under specified impact conditions. Samples may be housed in a thermostatic bath, based on the reference standards ASTM D746, ISO 812, and GB/T 15256. The cooling medium can be either dry ice (solid CO2) or alcohol. Working temperature from –70°C to +20°C.

With this test method, the test specimens are mounted onto cantilever grips and then immersed into the low temperature bath for 3 minutes (rubber) or 2.5 minutes (other). Then by striking the specimens with the tip of hammers you can detect at what temperatures the specimens will fracture.

QT-BPT Series Brittleness Point Temperature Tester
www.WorldofTest.com/brittleness.htm

The Brittleness Point Temperature Tester - QT-BPT Series Brittleness Tester covers the determination of the temperature at which rubber, plastics, and elastomers exhibit brittle failure under specified impact conditions. Samples to be housed in a thermostatic bath based on the reference standards ASTM D746, ISO 812, as well as and other international standards. The cooling medium is dry ice and Nitrogen. The working temperature is from –70°C to +20°C.

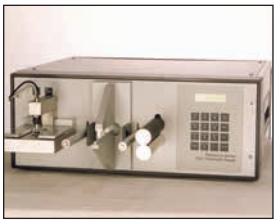
With this test method, the test specimens are mounted onto cantilever grips and then immersed into the low temperature bath for 3 minutes (rubber) or 2.5 minutes (other materials). The specimen is then struck with the tip of the hammers dart at a linear speed of 2 ± 0.2m/s at the lowest temperature that can withstand brittle failure. The sample is then checked for cracks, crevices, small holes and fragments.

Freezing Testers
www.WorldofTest.com/freezingtester.htm

Our freezing testers available in vertical or horizontal configurations are used to test the bending/flexing durability of rubber, plastics, synthetic leather, shoes, etc., under cold temperatures as low as -30°C or -50°C depending on the selected model.

Film Thickness Gauges

www.WorldofTest.com/filmthickness.htm



Model CX-1000 Film Thickness Gauge

The CX-1000 combines our patented capacitance sensor with industry-leading software to give you plastic film thickness profiling resolution to one microinch. This gauge can be run as a stand-alone bench unit, or can be connected to a computer for RS-232 operation by our Model CX-1100 Quality Control Software. Capacitance measurement is industry-recognized as the best choice for off-line, high resolution, continuous gauge profiling for plastic films.

The CX-1020 revolutionized capacitance film thickness gauging with the introduction of our patented AutoCal™ concept — by adding an absolute (contact) measurement probe with the capacitance sensor, the CX-1020 is self-calibrating.

AutoCal Options: Floating or fixed Anvil or MultiSensor Option with Roller Contact

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Model MX-1210 Microgauge

In the past, film and paper producers and converters have had the choice of caliper gauges which were either value- priced thickness-only machines, or expensive computer- operated machines. The MX-series MicroGauges come as both stand-alone or PC-operated testers with optional Quality Control software for automatic calculation and graphical display of thickness profiles, statistics, and other information.

The MX-1210 utilizes an LVDT sensor, contact foot, and an isolated “C” frame assembly, and resolves to ten millionths of an inch with accuracy to 20 microinches. Rugged and cost effective, the Microgauge can provide accurate measurement of caliper or thickness of paper, tissue and plastic films. Drive increments can be set for 1 to 6 inch steps (paper) or 0.20 to 4.0 inch steps (film) with other ranges available.

X-Ray Non Contact On-Line Thickness Gauge

www.WorldofTest.com/online-film-thickness.htm

The modern production process requires faster and more accurate quality control technologies to improve the overall quality and ensure optimized production parameters. Qualitest’s On-line non-contact and non-destructive X-ray measurement and control system improves the quality of your products by providing real-time feedback of absolute or deviation from target thickness measurements.

The benefit of high-speed measurement and vital statistical data is optimized production control; which leads to cost reduction and productivity increase for plastic sheet, film, foil or plastic coating production lines.

Qualitest On-line Film Thickness measurement systems are offered in three different standard precision ranges and are available in both O-Attenuation Calculation shaped and C-shaped frames. The standard effective scanning width is 59 inches (1500mm). Qualitest also offers customized solutions to meet most production requirements.

Model CHY Series Thickness Testers

www.WorldofTest.com/chy-thickness.htm

The CHY series Thickness Testers are designed based on the mechanical contacting method, which effectively ensures standard and accurate test data. Customization is available, but the contact area and pressure gauge are strictly designed according to standard requirements. The unit provides an automatic lifting presser foot which minimizes errors that are caused by operators during tests. The unit also has a manual or automatic operating mode for convenient testing.

	CHY-C2	CHY-CA	CHY-CB
Test Range:	0 - 2 mm (standard)	0 - 2 mm (standard)	0 - 2 mm (standard)
	0 - 6 mm, 12 mm (optional)	0 - 6 mm, 12 mm (optional)	0 - 6 mm, 12 mm (optional)
Resolution:	0.1 µm	0.1 µm	0.1 µm
Test Pressure:	17.5±1 kPa (film)		
	50±1 kPa (paper)		
Contact Area:	50 mm2 (film)		
	200 mm2 (paper)		
	Note: Select one presser foot for film or paper; Customization is available		
Test Feed:	N/A	10 times / minute (adjustable)	10 times / minute (adjustable)
Specimen Feeding Interval:	N/A	0 - 1000 mm	N/A
Specimen Feeding Speed:	N/A	0.1 - 99.9 mm / s	N/A
Instrument Size:	300 mm (L) x 275 mm (W) x 300 mm (H)	461 mm (L) x 334 mm (W) x 357 mm (H)	461 mm (L) x 334 mm (W) x 357 mm (H)
Power:	AC 220 V 50 Hz		
Net Weight:	33 kg	32 kg	37 kg
Configuration:	Standard: Mainframe, Micro Printer, and Standard Block		
	Optional: Professional Software, Communication Cable, Weight Tray and Weight		

Film / Transparency Testing

Coefficient of Friction (COF) Tester
www.WorldofTest.com/cof.htm

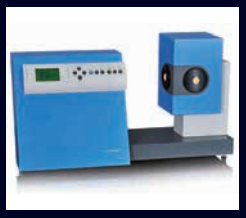
Our line of Coefficient of Friction Test instruments can be configured to suit your individual needs for economical, quality control testing of Friction properties of film products. Each instrument is designed for ease of use and maintenance, while meeting the standards for ASTM testing. Films, Paper, and Foils can be tested with these instruments along with Heat or Chemical Seals.

Friction / Peel Tester - FPT-F1
www.WorldofTest.com/frictionpeeltester.htm

FPT-F1 Friction/Peel Tester can be used to test coefficient of static and kinetic friction of plastic films, sheets, foils, paper, cardboard, PP woven bags, fabric (fabric style test), metal-plastic composite strip/belt for communication cable, conveyor belt and textile, as well as peel strength test of adhesive laminated products, medical adhesive bandage, release paper and protective films, etc.

Digital Elmendorf Tear Strength Tester
www.WorldofTest.com/elmendorf.htm

SLY-S1 Tearing Tester is designed for the tearing test of films, sheets, flexible PVC, PVDC, waterproof films, woven materials, polypropylene, polyester, paper, cardboard, textile and non-woven materials, etc.



Haze-Gard-Dual
www.WorldofTest.com/haze-gard.htm

Two Standard Methods in one Unit

Transparency of a product is influenced by absorption and scattering behavior of the specimen. Visually transparency is described by two phenomena: Haze and Clarity. The Haze-Gard Plus / Dual - Transparency Meter measures all transparency parameters in one instrument. The outstanding precision and reliability of the Haze-Gard Plus / Dual - Transparency Meter family have made it the standard for transparency measurement in the glass, plastic, film and packaging industries.

Hot Tack Tester - HTT-L1
www.WorldofTest.com/hottack.htm

HTT-L1 Hot Tack Tester is designed for hot tack and heat seal performance tests for plastic films, laminated films and other packaging films. Meanwhile, it can be used for peel, shear, tension and other test items for adhesives, adhesive tapes, laminated films, plastic films, paper and other flexible materials.

Hot Seal Tester - HST-H3
www.WorldofTest.com/hottack.htm

HST-H3 Heat Seal Tester is composed of upper and lower heat-sealing jaws. Before the test, preset the heat seal temperature, pressure, and dwell time value, then place the specimen in between the upper and lower jaws. The whole sealing process can be finished automatically.

Rub Tester Series
www.WorldofTest.com/inkrubtester.htm

The Ink Rub Testers are professionally applicable to the abrasion resistance test of surface coating layers of printed materials, e.g., ink layer or photosensitive (PS) coating. These instruments effectively analyze the problems of poor abrasion resistance, ink layer falling off, lower printable force, and bad hardness of coating layers of printed materials.

Film Permeability Testers

W3/330 - Permeation Instruments
www.WorldofTest.com/w3-330-water-vapour-transmission-system.htm

The W3/330 Water Vapor Transmission Rate System is applicable for testing plastic films, laminated films, sheets, solar energy back sheets, high barrier materials, foils, OLED, water-proof membranes and bottles, pouches, jars, and boxes made of plastic, rubber, paper, glass, and metal, as well as specialty medical devices. By measuring the water vapor transmission rate, technical index of products (e.g., packaging materials) can be controlled and adjusted, in order to meet different demands in product application.

W3/060 - Permeability Tester
www.WorldofTest.com/w3-060-water-vapour-transmission-system.htm

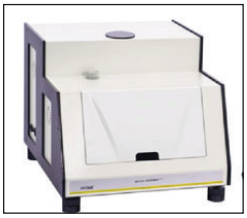
The W3/060 Permeability Tester is based on the cup method, and is professionally applicable to the water vapor transmission rate test of film specimens. It is equipped with high resolution sensor, whose test resolution is 0.0001g. The sensor also provides excellent test sensitivity.

W3/0120 - Water Vapor Transmission Rate Instrument
www.WorldofTest.com/w3-0120-moisture-vapor-transmission-system.htm

The W3/0120 Water Vapor Transmission Rate Instrument is based on the cup method, and is professionally applicable to the water vapor transmission rate test of plastic film, composite film, sheets and other materials used in the medical and other industries. By testing the water vapor transmission rate, the technical index of the materials could be controlled to meet the requirements for production.

W3/030 - Permeability Tester
www.WorldofTest.com/w3-030-water-vapour-transmission-system.htm

The W3/030 Permeability Tester is based on the cup method, and is professionally applicable to the water vapor transmission rate test of plastic film, composite film, sheets and other materials used in the medical and construction industry. By testing the water vapor transmission rate, the technical index of the materials could be controlled to meet the requirements for production.



W3/031 - Permeability Tester
www.WorldofTest.com/w3-031-water-vapour-transmission-system.htm

The W3/031 Water Vapor Transmission Rate Tester is based on the cup method, and is professionally applicable to the water vapor transmission rate test of film specimens. It is equipped with three individual test dishes and the testing process is completely automatic and conforms to international standards.

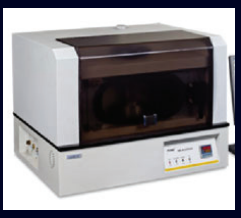
W3/230 - Water Vapor Barrier Tester
www.WorldofTest.com/w3-230-water-vapour-transmission-system.htm

The W3/330 Water Vapor Transmission Rate System is applicable for testing plastic films, laminated films, sheets, solar energy back sheets, high barrier materials, foils, OLED, water-proof membranes and bottles, pouches, jars, and boxes made of plastic, rubber, paper, glass, and metal, as well as specialty medical devices. By measuring the water vapor transmission rate, technical index of products (e.g., packaging materials) can be controlled and adjusted, in order to meet different demands in product application.

W3/130 - Permeability Tester
www.WorldofTest.com/w3-130-water-vapour-transmission-system.htm

The W3/130 Water Vapor Transmission Rate Tester is based on the humidity sensor method, and is professionally applicable to the water vapor transmission rate test of film specimens. It is equipped with three individual test dishes, and the testing process is completely automatic and conforms to international standards.

Film Permeability Testers



VAC-V1 - Gas Permeability Tester Automatic Gas
www.WorldofTest.com/vac-v1-gas-permeability-tester.htm

The VAC-V1 Gas Permeability Tester Automatic Gas is based on the differential pressure method, and is professionally applicable to the determination of gas transmission rate as well as solubility coefficient, diffusion coefficient and permeability coefficient of plastic films, composite films, high barrier materials, sheeting, metal foils, rubber, tires, and permeable membranes.

VAC-V2 - Gas Permeability Tester Permeation Instrument
www.WorldofTest.com/vac-v2-gas-permeability-tester.htm

The VAC-V2 Gas Permeability Tester Permeation Instrument is based on the differential pressure method, and is professionally applicable to the determination of gas transmission rate as well as solubility coefficient, diffusion coefficient and permeability coefficient of plastic films, composite films, high barrier materials, sheeting, and aluminum foils.

VAC-V3 - Gas Permeability Tester
www.WorldofTest.com/vac-v3-gas-permeability-tester.htm

The VAC-V3 Gas Permeabiity Tester is based on the differential pressure method, and is professionally applicable to the determination of gas transmission rate as well as solubility coefficient, diffusion coefficient, and permeability coefficient of plastic films, composite films, high barrier materials, sheeting, and aluminum foils.

VAC-VBS - Permeability Tester
www.WorldofTest.com/vac-vbs-gas-permeability-tester.htm

The VAC-VBS Gas Permeability Tester is based on the differential pressure method, and is professionally applicable to the determination of gas transmission rate of films, sheeting, high barrier materials, and aluminum foils.

OX2-230 - Oxygen Permeation Analyzer for Film and Package Specimens
www.WorldofTest.com/ox2-230-oxygen-transmission-rate-tester.htm

The OX2-230 - Oxygen Permeation Analyzer for film and package specimens is professionally designed for the determination of oxygen transmission rate of film and package specimens. It has three test modes and is applicable to various materials with high, medium, and low oxygen permeability. It is also embedded with high precision oxygen sensor, which provides a huge test range (0.01 - 65000 cm3 / m2 • d) and durable service life.

OX2-231 - Oxygen Permeation Analyzer for Film and Package Specimens
www.WorldofTest.com/ox2-231-oxygen-transmission-rate-tester.htm

The OX2-231 Oxygen Permeation Analyzer for film and package specimens tester is based on the equal pressure method, and is professionally applicable to the determination of oxygen transmission rate of film and package products, including plastic films, composite films, sheeting, plastic bottles, plastic bags and other packages.

MGT/01 - Permeability Tester
www.WorldofTest.com/mgt-01-mixed-gas-permeability-analyzer.htm

The MGT/01 Permeability Tester is based on the combination of differential pressure methods and chromatography analysis technology. It is the only instrument in the market that provides the quantitative and qualitative analysis of organic gas permeability for various films and sheeting materials.

The Mixed Gas Permeability Analyzer - MGT/01 - Permeability Tester system utilizes Qualitest's latest embedded computer control system that provides a better performance than traditional single chip system.

Film Permeability Testers

G2/130 - Permeability Tester for Hollow Packages
www.WorldofTest.com/g2-130-container-gas-permeability-tester.htm

The G2/130 Container Gas Permeability Tester for hollow packages is based on the differential pressure method, and professionally applicable to the determination of gas transmission rate of finished package containers. Test gases could be air, oxygen, nitrogen, and carbon dioxide, and testable containers include various bottles of carbonated drinks, juice, tea, as well as packages of edible oil, dairy products, washing supplies and metal containers.

G2/131 - Permeability Tester for Hollow Packages
www.WorldofTest.com/g2-131-container-gas-permeability-tester.htm

The G2/131 Gas Permeability Tester for hollow packages is based on the differential pressure method, and is professionally applicable to the determination of gas transmission rate, solubility coefficient, diffusion coefficient and permeability coefficient of plastic films, composite films, high barrier materials, sheets, and aluminum foils at different temperatures. The system is equipped with three diffusion cells, which could test specimens simultaneously with individual test results. The testing process conforms to GB, ISO, ASTM, and other international standards.

G2/132 - Permeability Tester for Hollow Packages
www.WorldofTest.com/g2-132-container-gas-permeability-tester.htm

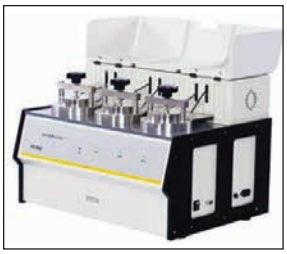
The G2/132 Gas Permeability Tester for hollow packages is mounted in the gas diffusion cell to form a sealed barrier between two chambers. First, the lower-pressure chamber is evacuated, followed by the evacuation of the entire cell. A flow of gas is then introduced into the evacuated higher-pressure chamber and a constant pressure difference is generated between the two chambers. The gas permeability and other barrier properties of the specimen can be obtained by monitoring the pressure changes in the lower chamber.

OR2/411 - Permeability Tester
www.WorldofTest.com/or2-411-organic-gas-permeability-analyzer.htm

The OR2/411 Organic Gas Permeability Tester is based on the combination of differential pressure method and chromatography analysis technology. It is the only instrument in the market that provides the quantitative and qualitative analysis of organic gas permeability of various films and sheeting materials. The Organic Gas Permeability Analyzer - OR2/411 - Permeability Tester system utilizes Qualitest's latest embedded computer control system that provides a better performance than traditional single chip system.

G2/110 - Permeability Tester
www.WorldofTest.com/g2-110-gas-separation-membrane-permeability-analyzer.htm

The G2/110 Gas Separation Membrane Permeability Analyzer is based on the combination of differential pressure method and chromatography analysis technology. It is the only instrument in the market that provides the quantitative and qualitative analysis of gas permeability of sole gas or mixed gases in separation membranes. The Gas Separation Membrane - G2/110 - Permeability Tester - system utilizes Qualitest's latest embedded computer control system that provides a better performance than traditional single chip system.



BTY-B2P - Permeability Tester for Battery Diaphragms & Breathable Films
www.WorldofTest.com/bty-b2p-gas-permeability-tester.htm

The BTY-B2P Gas Permeability Tester for Battery Diaphragms & Breathable Films is based on the differential pressure method, and is professionally applicable to the determination of gas permeability of battery diaphragms, breathable films and other relative polymer products

Automatic Film Tensile Testers

Automatic Film Tensile Testers offer high-precision testing of force properties (better than 0.5% of reading accuracy) for multiple test ranges. The instruments are designed with independent test modes and bidirectional test modes for stretching and compression, all meeting standard testing requirements. These units are designed for measuring tensility, peeling, deformation, tearing, heat sealing, adhesive, puncture force, opening force low speed unwrapping force, and other performance properties of plastic films, composite materials, soft package materials, plastic flexible tubes, adhesives, adhesive tape, label stickers, medical plasters, release paper, protection films, combined caps, aluminum foil, diaphragm, back sheets, non-woven fabrics, rubber and paper, and much more.
The supplied software provides easy-to-read data analysis and comparison charts.

Pre-conditioned specimens are mounted between two grips, which positions the specimen during the tests. The force and displacement changes are recorded separately by the load cell fixed on the grip and the embedded displacement transducer.

Standards: ISO 37, ASTM E4, ASTM D882, ASTM D1938, ASTM D3330, ASTM F88, ASTM F904

MED-01 Medical Packaging Tester
www.WorldofTest.com/medicalpackaging.htm

The MED-01 Medical Packaging Tester is professionally applicable to the determination of force properties of various medical packaging materials, with high precision (better than 0.5% of reading accuracy) and multiple test ranges. The instrument is designed with 16 independent test modes and bidirectional test mode of stretching and compression, which can meet various test requirements.

- Better than 0.5% of reading value effectively ensures accurate test results.
- Seventeen independent test modes are available, including compression force, tensile strength, and peel strength of medical appliances and foams.
- Professional pressure sensor monitors the internal pressure change during the test of force properties.
- The system supports the bidirectional test mode of stretching and compression, and test speed can be freely adjusted based on user requirements.
- Intelligent designs of over-travel protection, overload protection, and automatic position reset for safe test operation.

XLW (EC) Auto Tensile Tester
www.WorldofTest.com/filmautotensile.htm

The XLW (EC) Auto Tensile Tester can be used to measure tensility, peeling, deformation, tearing, and many more characteristics.

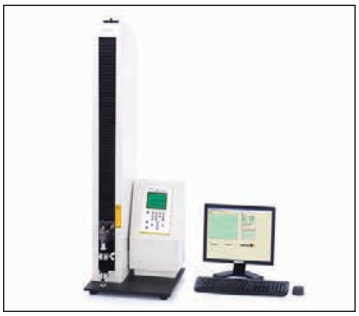
- Better than 0.5% of reading value effectively ensures accurate test results.
- Supports bidirectional testing modes including stretching and compression. Test speeds can be adjusted freely.
- Eight independent test modes are available, including tensile strength, peeling force, tearing force, heat sealing, and other performance tests.
- Different test ranges of load cells and seven distinct test speeds to meet different test requirements.
- Pneumatic clamping system provides an even clamping force for specimens to ensure the accuracy of test results.
- Intelligent designs of over-travel protection, overload protection, and automatic position reset for safe test operation.
- Professional operating software supports statistical analyses of group specimens, and can export test results in different units

XLW (G6) Tensile Tester
www.WorldofTest.com/filmautotensile.htm

The XLW (G6) Tensile Tester is designed primarily for tensile, tear, and peel tests.

- Better than 0.5% of reading value effectively ensures accurate test results.
- Multiple testing modes are available, including tensile strength, deformation, peeling, tearing, and more.
- Stress at defined elongation, elastic modulus and stress and strain can be analyzed.
- 1200mm extra-long stroke satisfies the test needs of various materials with extreme deformation rates.
- Six working stations and pneumatic specimen clamping facilitate to test multiple specimens simultaneously.
- Different test range of load cells and six distinct test speeds to meet different test requirements.

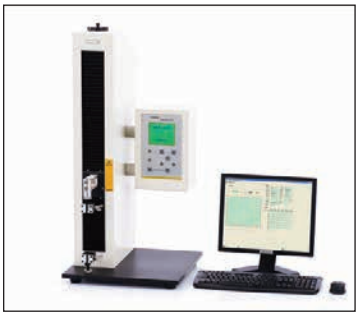
Automatic Film Tensile Testers



XLW (PC) Auto Tensile Tester
www.WorldofTest.com/filmautotensile.htm

XLW (PC) Auto tensile Tester is professionally applicable to the determination of force properties of various flexible packaging materials, with high precision (better than 0.5% of reading value) and multiple test ranges. The instrument is designed with seven independent test modes and can perform tests at seven different test speeds to meet various test conditions. Intelligent software facilitates to operate the instrument and provides data analysis and comparison functions.

- Better than 0.5% of reading value effectively ensures accurate test results.
- Seven independent test modes are available, including tensile strength, peeling force, tearing force, and other force properties of flexible packages.
- 1000mm extra-long stroke satisfies the test needs of various materials with extreme deformation rates.
- Different test range of load cells and seven distinct test speeds to meet different test requirements.
- The instrument is controlled by a micro-computer with menu interface, PVC operation panel, and large LCD display.



XLW Auto Tensile Tester
www.WorldofTest.com/filmautotensile.htm

The XLW Auto Tensile Tester is designed for specialty tests which include puncture test of hypodermic needles in artificial skin, puncture test of infusion bags, tear test of ZD-type caps, opening and unwrapping force, and many more.

- 1% of reading value effectively ensures the accuracy of test results.
- Seven independent test modes are available, including tensile strength, peeling force, tearing force, heat seal strength, and other force properties of flexible packages.
- Different ranges of load cells and seven distinct test speeds to meet different test requirements.
- The instrument is controlled by micro-computer with menu interface, PVC operation panel, and large LCD display.
- Intelligent designs of over-travel protection, overload protection, automatic position reset and power failure memory for safe test operation.

XLW (B) Auto Tensile Tester
www.WorldofTest.com/filmautotensile.htm

The XLW (B) Auto Tensile Tester can be used to measure the mechanical properties of plastic films, laminated materials, adhesives, adhesive tapes, adhesive bandages (plaster), release paper, protective films, leather, rubber, paper fiber, and more. It can perform tests for tensility, peeling, deformation, tearing, heat seal, adhesive, and open force.

- 1% of reading value effectively ensures the accuracy of test results
- Two independent test modes are available, including tensile strength and peeling force to meet the distinct requirements of users.
- Three kinds of testing data provided for each test, i.e., Maximum Value, Minimum Value, and Average Value. Group data analysis is also available.
- Deformation rate can be easily obtained by the elongation and elongation rate ruler.
- Different test range of load cells and seven distinct test speeds to meet different test requirements.
- The instrument is controlled by a micro-computer with menu interface, PVC operation panel, and large LCD display.

XLW(M) / Tensile Tester
www.WorldofTest.com/filmautotensile.htm

This instrument is equipped with more than 100 grips for tests of more than 1000 materials. Customization is available for special materials tests.

- 1% of reading value effectively ensures accurate test results.
- Seven independent test modes are available, including tensile strength, peeling force, tearing force, heat seal strength and other force properties of flexible packages.
- Mount the specimen tightly with pneumatic specimen clamp to ensure the accuracy of test results.
- Different ranges of load cells and seven distinct test speeds to meet different test requirements.

Color Testing Equipment

Light Booth Range
www.WorldofTest.com/lightbooth.htm

Colors appear differently under different lighting conditions. By using a light booth to simulate different lighting situations, companies can obtain objective color assessments with the highest confidence. The Qualitest light booth range performs an analysis that determines what your product will look like independent of location and environmental influences.

For effect finishes the Light Booth - QualiSpectra Effect - Visual Color Control even simulates different viewing angles and direct sunlight for sparkle evaluation

Spectra

Color evaluation of effect finishes with excellent agreement to instruments.

- Five different controlled light sources: D65, A, CWF/TL84, & UV
- Viewing area size: 51x71x55cm

Spectra Basic

For general color evaluation under defined lighting conditions.

- Five different controlled light sources: D65, A, and CWF/TL84
- Viewing area size: 37x60x33cm

Spectra Effect

For objective evaluation of color under different viewing angles, and flake characterization under different illumination conditions.

- Color evaluation for daylight under 6 defined viewing angles. A tiltable sample table allows the samples to be presented at the following angles: -15°/15°/25°/45°/75°/110°. The illumination system also pivots, ensuring excellent agreement with the measurement results of multi-angle color instruments.
- Sparkle evaluation under 15°, 45°, and 75° direct illumination. Three individual LED sets simulate the impression of direct sunlight. The LED light sources are guaranteed for 10 years.
- No warm-up or flickering - quick and reliable color and effect judgment is ensured.

Spectra Mini

For general color evaluation of small samples.

Five different controlled light sources: D65, A, and CWF/TL84
Viewing area size: 33x46x25cm

Portable Spectrophotometers (Color Meters)
www.WorldofTest.com/spectrophotometer.htm

The market for color instruments is changing with the need for precise, simple-to-use portable devices. Now color measurement can be done wherever it is needed with our range of Portable Spectrophotometers, with the capacity to control a production process for color variations, as well as approve new batches and suppliers and testing pigments for weathering and temperature stability.

Qualitest offers a complete line of portable spectrophotometers for any application, available as 45/0 or sphere geometry

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Spectro-Guide
www.WorldofTest.com/spectro-guide.htm

The overall appearance of a product is influenced by color and gloss. A sample of the same color but with a higher gloss level is visually perceived darker and more saturated than a low gloss sample. In order to get a uniform appearance, both attributes need to be controlled. The spectro-guide is unique as it measures both attributes simultaneously. Thus, the cause of a mismatch can be clearly defined in any situation.

- Color (45/0 or sphere) and 60° gloss are displayed at the same time
- In compliance with international specifications - DIN approval for gloss measurement
- Tolerances for color and gloss allow quick pass/fail decisions Win production

Color Testing Equipment

Gloss Meters - www.WorldofTest.com/glossmeter.htm

Gloss is a measure of the proportion of light that has a specular reflection from the surface of materials such as the wood floor, paint, plastics, and paper. A surface such as a mirror has a high gloss, where a surface such as chalk has less because the light reflected is diffused. Numerous international technical standards define the specifications of different types of gloss meters used on different types of materials. For instance, a major user of gloss meters is in the auto industry, with applications on both the factory floor and the repair shop.

The gloss meter provides a quantifiable way of measuring gloss intensity, ensuring consistency of measurement by defining the precise illumination and viewing conditions. The configuration of both illumination source and observation reception angles allows measurement over a small range of the overall reflection angle. The measurement results of a gloss meter are related to the amount of reflected light from a black glass standard with a defined refractive index. The ratio of reflected to incident light for the specimen, compared to the ratio for the gloss standard, is recorded as gloss units. Measurement angle refers to the angle between the incident and reflected light. Three measurement angles (20°, 60°, and 80°) are specified to cover the majority of industrial coating applications.

For example, if the measurement made at 60° is greater than 70 GU, the measurement angle should be changed to 20° to optimize measurement accuracy. Two additional angles are used for other materials: an angle of 45° is specified for the measurement of ceramics, films, textiles and anodised aluminium, whereas 75° is specified for paper and printed materials

QualiGloss I-60

QualiGloss I-60 is an intelligent gloss meter with memory, RS232, and software. It can auto diagnose and auto-calibrate. Glosses at 60°.

QualiGloss II-20 / 60

QualiGloss II-20/60 is an intelligent gloss meter with memory, RS232, and software. It can auto diagnose and auto-calibrate. Glosses at 20° and 60°.

QualiGloss II-60 / 85

QualiGloss II-60/85 is an intelligent gloss meter with memory, RS232, and software. It can auto diagnose and auto-calibrate. Glosses at 60° and 85°.

QualiGloss III

QualiGloss III is an intelligent gloss meter with memory, RS232, and software. It can auto diagnose and auto-calibrate. Glosses at 20°, 60° and 85°.

QualiGloss Mini-SS

QualiGloss Mini-SS is a small, stable, precise gloss meter. It uses a single AA-size battery. It's easy to use and convenient to carry. Single gloss at 60°.

QualiGloss Mini-S1

QualiGloss Mini-S1 is a small, stable, precise gloss meter. It uses a single AA-size battery. It's easy to use and convenient to carry. Single gloss at 60°.

QualiGloss Mini-F1

QualiGloss Mini-F1 is a small, stable, precise gloss meter. It uses a single AA-size battery. It's easy to use and convenient to carry. Single gloss at 60°.

QualiGloss Mini-SM

QualiGloss Mini-SM is a small, stable, precise gloss meter. It uses a single AA-size battery. It's easy to use and convenient to carry. Single gloss at 60°.

Micro-Gloss 20, 60, 85, 45 & 75

The micro-gloss has been the unsurpassed industry standard in gloss measurement for many years. It is the only gloss meter combining highest accuracy, ease-of-use and multiple functionality – essential for today`s testing requirements.

Micro-TRI-gloss 20, 60, 85

The micro-gloss has been the unsurpassed industry standard in gloss measurement for many years. It is the only gloss meter combining highest accuracy, ease-of-use and multiple functionality – essential for today`s testing requirements.

Micro-TRI-gloss µ

Gloss and film thickness are important QC criteria for coatings. The new micro-TRI-gloss µ measures both in seconds and at the same position. This saves time and is ideal for tests in the field.

Micro-gloss 60 S & Micro Tri Gloss S

The micro-gloss has been the unsurpassed industry standard in gloss measurement for many years. It is the only gloss meter combining highest accuracy, ease-of-use and multiple functionality – essential for today`s testing requirements.

Color Testing Equipment

Haze-Gloss
www.WorldofTest.com/haze.htm

The haze-gloss was designed for the needs of laboratories. Gloss, haze, and mirror reflection can be all measured with one instrument for low to high gloss surfaces.

- Gloss 20°, 60°, 85°, and haze
- Mirror reflection for materials with very high reflection capabilities, such as metals
- Reference beam, closed optics, and self diagnosis guarantee accurate quality control

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Wave Dual
www.WorldofTest.com/orange-peel-doi-meter.htm

Performs Orange Peel and DOI measurement on high to semi gloss surfaces. Appearance control is no longer limited to final topcoat inspection.
Like the wave-scan DOI, the optical profile of high gloss surfaces is detected using a laser light source. An additional, infrared LED allows measuring the same structure spectrum (0.1 - 30 mm) on medium gloss surfaces. The dullness measurement is recorded with state-of-the-art CCD camera technology. It gives information on the image forming qualities of the surface caused by structures < 0.1mm.

Wave II
www.WorldofTest.com/orange-peel-doi-meter.htm

For flat and curved surfaces (radius larger than 50 cm)
- Classical LW, SW, and customer-specific scales
- Structure spectrum to analyze appearance changes for optimization
- Dullness and DOI measurement independent of the paint system
- Easy scroll wheel operation and large, multilingual display
- Scales and scan lengths can be selected from menu
- Full statistics and data saving
- Docking station for data transfer to the PC and recharging the batteries of the Orange Peel meter
- Smart-chart software for data analysis and documentation

Wave Micro
www.WorldofTest.com/orange-peel-doi-meter.htm

Provides Orange Peel and DOI measurement for curved and small parts. Automotive add-on parts can be easily analyzed such as bumpers, gas tank doors, mirror housings, door handles, decorative trim, or motorcycle parts.
- Curvature: 300mm
- Minimum sample size: 25 mm x 40 mm
- Selectable scan length: 20, 10, or 5cm
- Measurement area: 4 mm x scan length
- DOI measurement possible without scanning the surface
- Good correlation to wave-scan DOI (the appearance standard in the automotive industry)

CAP 1000+ / CAP 2000+ Viscometer
www.WorldofTest.com/capviscometer.htm

The versatility of the CAP 1000+ and CAP 2000+ Viscometer makes these instruments a practical tool for any QC or R&D lab requiring quick and easy testing of materials, regardless of application, at high shear rates.
- Provides for viscosity measurements at high shear rates
- LCD display of viscosity in Poise or Pascal-seconds
- Uses less than 2 ml of sample to avoid excess cleaning and material costs
- Automatic viscosity range calibration and cone gap positioning make the viscometer easy to use
- Set the viscometer to take a reading at different timed intervals to ensure accuracy of results with thixotropic fluids

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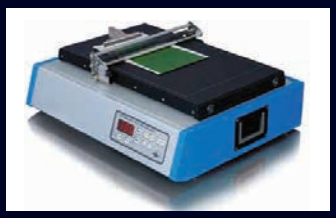


Film Applicator
www.WorldofTest.com/automaticfilmapplicator.htm

Tests can show irregularities caused by variations in speed and pressure on the applicator tool. The quality of the drawdown is dependent on the shear rate and the weight on the applicator. Measurements of film properties such as abrasion resistance, hiding power, and gloss are greatly affected by the application quality.

Aging Ovens

www.WorldofTest.com/blockoven.htm

Cell Aging Oven - EB Series

The Cell Aging Oven - EB Series are designed for aging tests according ASTM D 865 Rubber- Deterioration by Heating in Air (Test Tube Enclosure). The ovens can also be used for testing in liquids according to ASTM D 471 Effect of Liquids. Cell ovens and cabinet aging ovens perform well inside the apparatus requirements in ISO 188, IEC 811, and other equivalent standards. The ovens are designed to give very low temperature variations in time and space, low or high air speed, and controlled air exchange rate.

Qualitest has determined that air speed is an essential factor to test, as it influences the aging results by increasing evaporation effects on softeners and antioxidants, and by increasing oxidation at higher air speeds. Qualitest aging ovens can test under low air speed or specified high air speed (1m/s) to perform tests that analyze the influence of air speed on a material.

Test Tube Aging Oven - EB Series

The Test Tube Aging Oven - EB Series are designed for aging tests according to ASTM D 865 Rubber-Deterioration by Heating in Air (Test Tube Enclosure). The ovens can also be used for testing in liquids according to ASTM D 471 and ISO 1817 Effect of Liquids. Glass tubes for both standards are included.

Common specifications:

- The ovens perform well inside the apparatus requirements in ASTM D865, ASTM D471, and ISO1817 (EB 11, EB 14).
- Temperature controller with 0.1°C set point.
- Solid state relay for safe control.
- Temperature indicator with sensor in one test tube (EB 11) or three test tubes (EB 14).

Monitoring oven temperatures

EC 11 is a data monitoring software used to monitor instruments in laboratories for temperature and humidity. The software has three main displays: one to see actual temperature values and corresponding curves, one for comparing historical data, and one for setting the communication with the amplifiers.

Cabinet Aging Oven - EB Series

Cabinet Aging Oven - EB Series for precision aging of rubbers and plastics under controlled conditions. Offered in two models — EB 04 and EB 10 — these units are shelf ovens and conform to ISO 188, ISO 3383, and IEC 811 standards. They are designed to give very low temperature variations in time and space, low air speed, and controlled air exchange rate. This is achieved by using an inner chamber with controlled air flow.

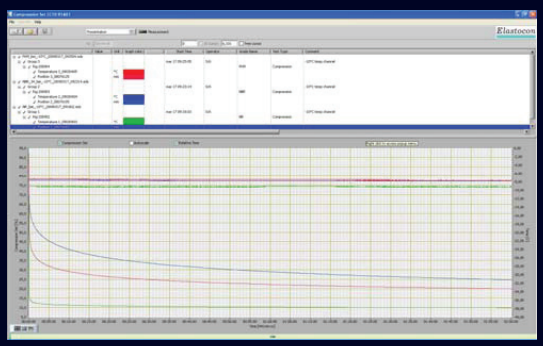
Cabinet Ovens are ideal for aging finished products and large test pieces which are unsuitable for cell ovens. The oven is designed to accommodate most sizes and types of samples.

The EB 04 model is equipped with air pump and a flowmeter, whereas the EB 10 model is a budget version, in which the air pump is replaced by a factory set throttle to give a fixed air exchange rate of changes per hour. The ovens are supplied in two sizes: 60 and 120 Lt.

Advanced Polymer Testing Instruments

Low Temperature Tester - Combo TR Gehman Brittleness Compression Set Test System
www.WorldofTest.com/combo-low-temperature-tester.htm

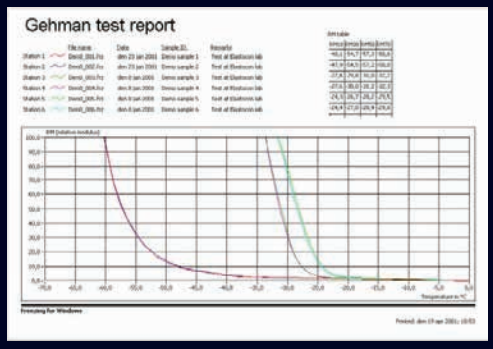
The TR-Tester, Gehman Tester, and Brittleness Tester can be combined using the same base unit and a rig changing system. The combined instrument consists of a base unit with a cooling bath. The three different test rigs are then mounted on a carousel. This means that no lifting is necessary when switching from one method to another. An automatic computerized Low Temperature Tester increases the precision up to 5 times. The capacity will also increase by about 50% and the labour time will decrease by approximately 75%.



Gehman Tester - ET-02 - Relative Stiffness Characteristics Determination
www.WorldofTest.com/gehman.htm

Gehman Tester - ET-02 - Relative Stiffness Characteristics can determine the relative stiffness characteristics of vulcanized or thermoplastic rubbers. Also called the Gehman procedure, the test is done according to ISO 1432, ASTM D1053, and other technical standards.

The Gehman Tester has 6 test stations and is completely computerized, performing tests automatically. The computer controls both the temperature rise and measures the torsion angle of the samples. The results are displayed in a graph and RM2, RM5, RM10 and RM100 values are calculated. The results can also be presented as a table.



TR Tester - ET-01 - Low Temperature Retraction Tester
www.WorldofTest.com/trtester.htm

The TR Tester - ET-01 - Low Temperature Retraction Tester is primarily used to determine low temperature characteristics by the temperature retraction procedure according to ISO 2921 and ASTM D-1329.

This tester has 6 test stations and performs the test automatically after the media has been cooled down and the samples have been mounted. An automatic release of the samples is initiated after the pre-cooling period has been completed.

The computer controls both the temperature rise and measures the length change of the samples

Low Temperature Compression Set Rig - EV-09
www.WorldofTest.com/compressionsetrig.htm

Low Temperature Compression Set Rig - EV-09 performs compression set at low temperatures without having to open the deep-freezer, which would compromise the compression set result.

By using our EV 09 compression rig in combination with a deep-freezer with a special lid, the test can be performed without touching the test piece. All adjustments of height and releasing the compression are made outside the freezer, thus improving the accuracy of the test results.

The EV 09 rig has a digital gauge (0.001 mm), the piston is made of titanium, and the test weight is easily mounted on the titanium piston. The sample can remain in the test rig for the whole test period as well as during the recovery period.

More Plastics Testing Equipment

EB-15 Full Notch Creep Tester
www.WorldofTest.com/fullnotchcreeptester.htm

The Full Notch Creep Tester - EB-15 - utilizes load cells and servo motors to apply and hold the load rather than the conventional method of applying dead weights. In addition to eliminating the handling problems associated with weights, this design offers the possibility of also running features such as temperature and load ramps.

The instrument is offered in multiple configurations of test stations and load ranges. The Borealis unit has 10 test stations and is available for testing in liquids according to ISO 16770 (Full Notch Creep Test) or in air according to ISO 899. For ISO 899, the test stations are built into a precision aging oven for maximum control over conditions for long-term testing.

Creep can be measured by clip-on extensometers on dumbbells or by the motor encoder when testing strip specimens. Results are presented in graphical and table formats as absolute creep or creep index. In order to study the actual sample failure, the data logging rate is increased just before a break occurs.

Full Notch Creep Tester QT-FNCT-6 Series
www.WorldofTest.com/fullnotchcreeptester.htm

This unit is used to determine the stress cracking resistance of polyethylene materials in any environment. A test specimen is prepared as a square-section bar with coplanar notches in each face. This material is subjected to a static tensile load in a temperature-controlled environment, such as air, water, or a surfactant solution. The geometry of the specimen is such that plane strain conditions are obtained and brittle failure occurs under appropriate tensile load and temperature conditions. The time for this brittle failure to occur after loading is recorded and analyzed.

Film Creep Tester EB-24
www.WorldofTest.com/creep.htm

Qualitest's Film Creep Tester is based on our Aging Oven EB 10-II, with a digital ruler system including a line laser pointer for manually measuring the creep. The ruler is connected to a computer and the values are fed into an Excel template, which calculates the result and presents graphs.

- Controlled air flow, 14 air changes /hour.
- Window, w x h 370 x 300 mm.
- Hooks to hang 10 test pieces 25 x 100 mm.
- Measuring system with laser pointer (0,01 mm resolution) to measure elongation, range 300 mm.
- Software to feed the data into an Excel template (template included).
- 10 Sets of grips to attach to the test pieces, together with weights, 1,3 kg and 2,3 kg.
- Customizable to test samples in a water tank during creep test.

Automatic Creep and Stress Relaxation Tester - EB-18
www.WorldofTest.com/automaticcreepstressrelaxationtester.htm

The instrument is based on our triple temperature oven EB 07, which means that each test station can run with an individual temperature.

The test rigs are based on our relaxation rig EB 02. The lowering and raising of the rigs is driven by a servo motor, which also facilitates the compression or tension of the samples.

The test rigs are built into a plastic cabinet made of polycarbonate and aluminum profiles. The cabinet is cooled by Peltier elements, which keep a constant room temperature around the test stations. The system includes three test stations for testing of stress relaxation or creep in compression or tension, according to ISO 3384 and ISO 899-1. A 1000 N load cell, PT 100 sensors, and displacement sensors are included. The instrument can be extended up to 6 test stations.

Stress Relaxation Tester - EB-02
www.WorldofTest.com/stressrelaxation.htm

Stress Relaxation Tester - EB-02 takes continuous measurements in either compression or tension. This unit meets the requirements in ISO 3384, ISO 6914, and ASTM D6147. The relaxation rigs are used in combination with cell aging ovens EB 01 or EB 07 when testing at elevated temperatures.

Qualitest offers special versions of this unit for use in relaxation testing. The height of these ovens is lower and incorporates an integrated draught hood, which is used to eliminate variations in force measurements due to temperature and air effects in the surrounding environment.

More Plastics Testing Equipment

Carbon Black Content Analyzer - ES-14 - Tube Oven
www.WorldofTest.com/carbonblackcontent.htm

The ES-14 Carbon Black Content Analyzer is a Tube Oven for polymer and carbon black content analysis. The tube oven can be used for the following test methods:
- ISO 247 Rubber - Determination of Ash
- ISO 1408 Rubber - Determination of carbon black content
- ASTM D297 Rubber - Determination of carbon black and ash content
- ASTM D1603 Plastics - Test method for carbon black in olefin plastics

Hot Set Tester - EB 16II
www.WorldofTest.com/eb-16ii-hot-set-tester.htm

Hot Set Tester - EB 16II is made for hot set testing of cable material according to IEC 811-2-1. To avoid temperature loss when inserting and cutting the samples, the samples are introduced through a small opening in the top of the oven. To get a suitable working height and not shake the samples during insertion, the oven is fixed and the sample holder moves by using a stable servo motor-driven screw system. The oven has a controlled air exchange rate and low air speed which can be controlled by a flow meter, meeting the requirements for aging ovens in IEC 811.

Elastometer - EF-02
www.WorldofTest.com/elastometer.htm

The instrument is a specialized compression tester controlled by a PC. The software permits several types of tests to be performed, such as:
- Discontinuous stress relaxation tests according to ISO 3384 method B.
- Standard compression tests to measure modulus, such as in ISO 7743.

Environmental Stress-Cracking Tester
www.WorldofTest.com/stresscrackingtester.htm

This machine is used to determine the susceptibility of ethylene plastics, as defined in terminology D883, to environmental stress-cracking when subjected to the conditions specified in ASTM D1639-0. These unit conduct tests under specific conditions of stress and in the presence of environments such as soaps, wetting agents, oils, detergents, and ethylene plastics.

Rotary Abrasion Tester
www.WorldofTest.com/rotaryabrasion.htm

Rotary Abrasion Tester is a cost-effective and high-quality instrument used to determine the abrasion for rubber, leather, plastics, fabrics, paper, paint, plywood, tiles, and glass. This unit is built in conformance to ASTM D4157, DIN-53754/53799/53109/52347, and TAPPI T476. For this method of abrasion, a four-inch diameter sample is mounted on a rotating turntable. Abrasive wheels are applied to the sample using a fixed weight.

Limiting Oxygen Index Chamber
www.WorldofTest.com/loi.htm

The advanced LOI Limiting Oxygen Index Chamber accurately determines the relative flammability of plastics and other materials by measuring the minimum oxygen concentration that will support combustion according to ASTM D2863 and ISO 4589 specifications. The test specimens are burned in a precisely controlled atmosphere of nitrogen and oxygen. The operator adjusts the supply gases and uses the flow meter readings to calculate the oxygen index.

The LOI features the following:
- Flexible Sample Testing: Specimens may be in rod, film, or composite form
- Uniform Combustion Atmosphere : Nitrogen & oxygen are fully mixed in a special dispersion chamber and glass bead bed before entering column
- Conforms to U.S. Test Standards: Meets ASTM D 2863
- Optional Smoke Density Detector and Chart Recorder: Records variations in smoke generation throughout test

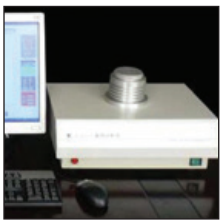
More Plastics Testing Equipment

Apparent (Bulk) Density Tester
www.WorldofTest.com/apparentdensity.htm

This series of testers are used to measure apparent density, bulk factor, and (where applicable) the pourability of plastic materials such as molding powders. According to ASTM D 1895, these three methods are applicable to various material forms that are commonly encountered, from powders and granules to large flakes and cut fibers.

Gel Timer
www.WorldofTest.com/geltimer.htm

These gel timers are perfect for determining the gel time of resinous plastics, adhesives, crying oils, two component elastomers, and paints. A low torque, synchronous motor rotates a specially shaped stirrer in the catalyzed resin or elastomer. As gelation occurs, drag exceeds torque and the motor stalls. This signals an electronic circuit to stop the clock and activate a flashing lamp to indicate that the test has been completed.



Differential Scanning Calorimeter - QT-DSC6 Series
www.WorldofTest.com/differential-scanning-calorimeter.htm

Qualitest's Differential scanning calorimeter is an intelligent, compact, and low-cost thermal analysis instrument. Our QT-DSC series Differential Scanning Calorimeter combines several modern technologies to perform a robust, compact, and cost-effective thermal analysis. Tests can be carried out up to a maximum of 500°C. Its analysis is based upon the detection of changes in the heat content (enthalpy) of a sample.

The QT-DSC6 Calorimeter can determine oxidation induction time of polyethylene, curing percentage of epoxy, anti-oxide of lubricant, enthalpy change and partial enthalpy change, glass transition temperature, extrapolated onset temperature and melting point for crystalline polymer, quality control of engineering thermoplastics, polyethylene/polypropylene blend and copolymer, etc.

Salt Spray Tester – Salt Spray Cabinet – Chamber – Fog Apparatus
www.WorldofTest.com/saltspraytester.htm

The Salt Spray Tester – Salt Spray Cabinet – Chamber – Fog Apparatus is used to create and maintain a salt spray environment, mimicking a foggy setting in order to test the anti-corrosion quality of all surfaces treated with rust-proof painting, coating, electroplating, anodizing, and rust-proof greasing.
Sizes available from 108L to 1440L.

Leak and Seal Strength Detector - LSSD-01
www.WorldofTest.com/leaksealstrengthdetector.htm

Qualitest's Leak and Seal Strength Detector - LSSD-01 is professionally applicable to the quantitative determination of seal performance, seal quality, burst pressure, compression resistance, torsion force, and joint/disengaging force.

Applications: Plastic composite bags, flexible tubes, creep test, burst test of blister packages, aerosol valves, three-sided sealing materials, high-pressure tests, and pilfer-proof closures.

Additional fixtures available for closed/open package restraining tests, plastic pilfer proof closure tests, and flexible tubes tests

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Leak Tester - MFY-01 - Leak Tester
www.WorldofTest.com/leakagetester.htm

The Leak Tester - MFY-01 is professionally designed for the leakage tests of packages for food, drugs, medical instruments, daily chemical products, cars, electronic components, stationeries, and other industrial products. The instrument also can be used to test the seal performance of specimens after falling and compression tests.

QUALITEST™
WWW.WORLDOFTEST.COM

Qualitest also offers an extensive range of testing solutions for rubber, foam, paper & cardboard, textiles, cement & concrete, and metals.

Our rubber testing technologies include:

- Universal Tensile/Compression Testing Machines
- Durometers/IRHD Hardness Testers
- Abrasion Testers
- Resilience Elasticity/ Vertical Rebound Testers
- Carbon Black Dispersion Testers
- Rheometers
- Flexometers
- Specific Gravity Testers
- Densimeters
- Specimen Dies
- Clicker Presses
- Gehman Tester
- Temperature Retraction Test
- Stress Relaxation Testers
- Compression Set Test
- Williams Parallel Plate Plasometer
- Brittleness Temperature Tester
- Block / Aging Ovens
- Low Temperature Testers
- Slip Tester
- Tire Plunger
- Thickness Gauges
- and much more

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